



4310-05-P

## DEPARTMENT OF THE INTERIOR

### Office of Surface Mining Reclamation and Enforcement

#### 30 CFR Part 938

[PA-161-FOR; Docket ID: OSM-2012-0009]

#### Pennsylvania Regulatory Program

**AGENCY:** Office of Surface Mining Reclamation and Enforcement (“OSM”), Interior.

**ACTION:** Proposed rule; public comment period and opportunity for public hearing.

**SUMMARY:** OSM announces receipt of a proposed amendment to the Pennsylvania regulatory program under the Surface Mining Control and Reclamation Act of 1977 (“SMCRA” or the “Act”). Pennsylvania’s proposed amendment consists of additions related to beneficial use of coal ash upon active and abandoned mine sites. Pennsylvania is introducing beneficial use of coal ash into the Pennsylvania statutory scheme via Pennsylvania’s Solid Waste Management Act (“SWMA”), the Clean Streams Law (“CSL”), the Surface Mining Conservation and Reclamation Act and the Administrative

Code. Pennsylvania intends to revise its approved program pursuant to the additional flexibility afforded by the revised Federal regulations and SMCRA, as amended, to ensure Pennsylvania's proposed provision is consistent with and in accordance with SMCRA and the corresponding regulations. This document provides the times and locations that the Pennsylvania program and proposed amendment are available for public inspection, the comment period during which you may submit written comments and the procedures that we will follow for the public hearing, if one is requested.

**DATES:** We will accept written comments on these amendments until 4:00 p.m., Eastern Standard Time ("EST") [Insert date 30 days after the date of publication in the FEDERAL REGISTER]. If requested, we will hold a public hearing on the amendment on [Insert date 25 days after date of publication in the FEDERAL REGISTER]. We will accept requests to speak at a hearing until 4:00 p.m., EST on [Insert date 15 days after date of publication in the FEDERAL REGISTER].

**ADDRESSES:** You may submit comments, identified by SATS No. PA-161-FOR by any of the following methods:

- **Mail/Hand Delivery:** Mr. Ben Owens, Acting Chief, Pittsburgh Field Division, Office of Surface Mining Reclamation and Enforcement, 3 Parkway Center, 3<sup>rd</sup> Floor, Pittsburgh, Pennsylvania 15220
- **Fax:** (412) 937-2888.
- **Federal eRulemaking Portal:** The amendment has been assigned Docket ID

OSM-2012-0009. If you would like to submit comments, go to

<http://www.regulations.gov> and follow the instructions.

*Instructions:* All submissions received must include the agency name and docket number for this rulemaking. For detailed instructions on submitting comments and additional information on the rulemaking process, see the “Public Comment Procedures” heading of the SUPPLEMENTARY INFORMATION section of this document.

*Docket:* For access to the docket to review copies of the Pennsylvania regulations, this amendment, a listing of any scheduled public hearings, and all written comments received in response to this document, you must go to the address listed below during normal business hours, Monday through Friday, excluding holidays. You may receive one free copy of the amendments by contacting OSM’s Pittsburgh Field Division Office; or you can view the full text of the program amendment available for you to read at [www.regulations.gov](http://www.regulations.gov).

In addition, you may review a copy of the amendment during regular business hours at one of the following locations:

Ben Owens, Acting Chief

Pittsburgh Field Division

Office of Surface Mining Reclamation and Enforcement

Appalachian Regional Coordinating Center

3 Parkway Center, 3<sup>rd</sup> Floor

Pittsburgh, Pennsylvania 15220

Telephone: (412) 937– 2827, E-mail: [bowens@osmre.gov](mailto:bowens@osmre.gov)

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Rachel Carson State Office Building

P.O. Box 8461

Harrisburg, Pennsylvania 17105–8461

Telephone: (717) 787–5015, E-mail: [tcallaghan@state.pa.us](mailto:tcallaghan@state.pa.us)

**FOR FURTHER INFORMATION CONTACT:** Ben Owens, Acting Chief, Pittsburgh

Field Division; Telephone: (412) 937-2827. E-mail: bowens@osmre.gov.

**SUPPLEMENTARY INFORMATION:**

- I. Background on the Pennsylvania Program
- II. Description of the Proposed Amendment
- III. Public Comment Procedures
- IV. Procedural Determinations

## **I. Background on the Pennsylvania Program**

Section 503(a) of the SMCRA permits a state to assume primacy for the regulation of surface coal mining and reclamation operations on non-Federal and non-Indian lands within its borders by demonstrating that its program includes, among other things, "a State law which provides for the regulation of surface coal mining and reclamation operations in accordance with the requirements of this Act . . .; and rules and regulations consistent with regulations issued by the Secretary pursuant to this Act." *See* 30 U.S.C. 1253(a)(1) and (7). On the basis of these criteria, the Secretary of the Interior conditionally approved the Pennsylvania program effective July 30, 1982. You can find background information on the Pennsylvania program, including the Secretary's findings, the disposition of comments, and the conditions of approval of the Pennsylvania program in the July 30, 1982, Federal Register (47 FR 33050). You can also find later actions concerning the Pennsylvania program and program amendments at 30 CFR 938.11, 938.12, 938.13, 938.15, and 938.16.

## **II. Description of the Proposed Amendment**

By letter dated March 13, 2012, (Administrative Record Number PA 894.000), Pennsylvania sent OSM a request to approve regulations related to the beneficial use of coal ash on active and abandoned mine lands. Key provisions of the proposed amendment include operating requirements for beneficial use, including certification guidelines for chemical and physical properties of coal ash beneficially used and water

quality monitoring requirements. Pennsylvania is requesting approval of regulations found at 25 Pa. Code Chapters 287.1 and 290, promulgated pursuant to the Pennsylvania SWMA.

#### 287.1 Definitions.

Coal ash, for the purposes of Chapters 287 and 290 includes: fly ash, bottom ash or boiler slag that resulted from the combustion of coal and is or has been beneficially used, reused or reclaimed for a commercial, industrial or governmental purpose. This includes materials are stored, processed, transported or sold for beneficial use, reuse or reclamation.

#### 290.1 Definitions.

Temporary coal ash storage pile is stored for not more than two weeks.

Water table is the toe top of the saturated zone including regional groundwater table, perched water tables, seasonal water tables and mine pools.

#### 290.2 Scope.

Coal ash that is not beneficially used in accordance with this regulation is subject to residual waste regulations. In the event of coal ash being mixed with residual waste, a beneficial use designation must be approved. If the coal is produced by co-firing coal or waste coal with an alternative fuel the material is regulated under this chapter if the alternative fuel is less than 20% by weight of the total fuel mixture and contributes less

than 10% by weight of total ash quantity, if the coal ash is mixed with construction and demolition waste, the beneficial use must be authorized under a permit for municipal waste and this chapter. Coal ash mixed with municipal waste—excluding construction and demolition waste—must not be beneficially used by direct placement into the environment.

Beneficial use activities under this chapter do not require an individual disposal permit.

#### 290.101 General requirements for beneficial use.

No permit is required for beneficial use of coal ash if this chapter is complied with.

To be considered a beneficial use, chemical analysis must indicate the coal ash does not exceed any of the maximum acceptable leachate levels discussed *infra*. Certain physical characteristics must be met as well.

A water quality monitoring plan is required for any structural fill, use at a mining activity site or abandoned surface coal mine site where more than 10,000 tons of coal ash per acre or more than 100,000 tons in total per site is used. Additionally, the Pennsylvania Department of Environmental Protection (“the Department”), at its discretion, may implement a water quality monitoring plan involving lesser quantities of coal ash. Coal ash may not be placed within eight feet of the water table unless used for mine subsidence control, mine fire control or mine sealing.

290.102. Use as a structural fill.

Sixty days prior to using coal ash as a structural fill a written proposal must be submitted to the Department detailing:

- Description of the project including a topographic and soils map;
- Commencement and completion dates;
- Construction plans including a stability analysis prepared by a licensed professional engineer;
- Estimate of the volume of coal ash to be utilized;
- A chemical and leaching analysis that may not be older than one year; and
- A landowner consent;

Should the project be anticipated to exceed 10,000 tons of coal ash per acre or more than 100,000 tons in total site, the landowner consent must be recorded and public notice given in a local newspaper of general circulation at least once a week for three consecutive weeks. Information in this notice must include:

- Name and business address of person proposing to beneficially use coal ash;
- Description, location and scope of the project; and
- The location of the Department office where a copy of the written proposal may be inspected.



The Department, at its discretion, may require a public notice for smaller projects. The Department will publish a notice in the *Pennsylvania Bulletin* of each written proposal received for use of coal ash as structural fill.

The Department will respond in writing to the person proposing the use of coal ash as structural fill indicating if it is consistent with this section.

The following additional requirements for coal ash being beneficially used as structural fill must be satisfied:

- pH must be 7.0 or above, unless otherwise approved; however, it may not exceed 9.0 pH during placement and storage unless public access is restricted;
- Slope of the structural fill may not be greater than 2.5 horizontal to 1.0 vertical;
- Coal ash must be spread uniformly and compacted in layers not exceeding two feet in thickness and must be spread and compacted within 24 hours of its delivery to the site unless it is classified as a coal ash storage area;
- Surface runoff shall be minimized;
- Surface water shall be diverted;
- The coal ash shall be covered with 12 inches of soil;
- Minimum compaction of 90% of the maximum dry density as determined by the Modified Proctor Test or 95% of the maximum dry density as determined by the Standard Proctor Test must be achieved; and
- Fugitive dust shall be minimized.

Coal ash used as structural fill may not be located within:

- 100 feet of an intermittent or perennial stream;
- 300 feet of an exceptional value or high quality water;
- 300 feet of a water supply unless consented to by the owner of the water supply and submitted to the Department;
- 25 feet of a bedrock outcrop (with limited exceptions to be approved by the Department);
- 100 feet of a sinkhole or sinkhole draining area;
- A 100-year floodplain of a water of Pennsylvania unless a properly constructed structure is in place as permitted by the Department to protect the structural fill;
- 100 feet of a wetland; or
- 300 feet of an exceptional value wetland.

An annual report must be submitted for any project where more than 10,000 tons of coal ash per acre or more than 100,000 tons of coal ash in total is proposed.

Any deviation from the approved physical or chemical standards must be reported to the Department within 72 hours.

290. 103. Use as a soil substitute.

Coal ash may be used as a soil substitute if sixty days prior to such use a written proposal is submitted to the Department. The proposal must contain:

- A description of the project including a topographic and soils map of the projected area and an explanation of how the coal ash will be stored prior to use, how the soil will be prepared for application, how the coal ash will be spread and, when necessary, how the coal ash will be incorporated into the soil;
- Commencement and conclusion dates of the project;
- Proposed volume of coal ash to be used, the proposed application rate and a justification for the rate;
- A total chemical and leaching analysis and pH analysis no older than one year old;
- A chemical analysis as discussed *infra*;
- An analysis indicating the coal ash will be beneficial to use of the soil. This must be prepared and signed by an expert in soil science; and
- A landowner consent.

The Department will respond in writing to the person proposing the use of coal ash as a soil substitute or additive indicating if it is consistent with this section.

To be considered a beneficial use as a soil substitute or additive the following must be met:

- pH must range between 6.5 to 8.0 when mixed together as required by the project;
- Chemical analysis demonstrates calcium carbonate equivalency requirements;
- Surface runoff is controlled;

- Coal ash must be incorporated into the soil within 48 hours of application, unless the Department approves a deviation. The coal ash must be incorporated into the first layer of surface soil or if such is not present, the coal ash and substitute material must equal one foot. Coal ash is to enhance soil properties or plant growth;
- Coal ash shall be applied at a rate per acre that protects public health, public safety and the environment; and
- Fugitive dust must be minimized.

Coal ash may not be applied to soil being used for agriculture when the soil pH is less than 5.5 or if resultant chemical or physical soil conditions would be detrimental to biota.

Coal ash as a soil substitute or additive may not be placed within:

- 100 feet of an intermittent or perennial stream;
- 300 feet of an exceptional value wetland or exceptional value or high quality waters;
- 300 feet of a water supply unless a landowner consents to a variance;
- 100 feet of a sinkhole or area draining to a sinkhole; and
- 300 feet from an occupied dwelling unless a landowner consents to a variance.

Maximum cumulative loading rates may not be exceeded in relationship to the following constituents: arsenic, boron, cadmium, chromium, copper, lead, mercury, molybdenum, nickel, selenium and zinc.

Records of chemical and physical analyses, quantity of coal ash utilized, location of placement and sources of the coal ash must be maintained for a minimum of three years and must be made available upon request by the Department.

Any deviation from the approved physical or chemical standards must be reported to the Department within 72 hours.

290.104. Beneficial use at coal mining activity sites.

Approval for the beneficial use of coal ash at coal mining activity sites must be:

- In compliance with the Pennsylvania CSL, Surface Mining Conservation and Reclamation Act, Coal Refuse Disposal Control Act and other applicable environmental statutes and regulations promulgated thereunder;
- Certification as discussed *infra*; and
- Approval of a request by the Department. Each person wishing to use certified coal ash for a beneficial use at a coal mining activity site as part of a reclamation plan must submit a request with an appropriate filing fee and include the following:

- A description of the project, including an estimate in cubic yards of the amount of coal ash to be used and how it will be stored prior to placement;
- Documentation that the coal ash has been certified for its intended use, including the identity of the generator and the Department-assigned certification identifier;
- A consent from the landowner properly recorded; and
- An appropriate water quality monitoring plan.

When beneficial coal ash is utilized at a coal mining activity site, a nonrefundable permit filing fee is to be paid annually in the amount of \$2,000 for each year it is utilized than \$1,000 for each year until final bond release is achieved. This fee will be utilized to administer compliance programs. This fee will be reviewed and adjusted as necessary.

Public notice shall be given if coal ash is utilized at a coal mining activity site.

Overall improvement in water quality or prevention of degradation of water quality is to be the requirement for using coal ash for reclamation purposes at coal mining activity sites. Coal ash shall only be beneficially used for reclamation at the following locations: pit area, abandoned mine lands within the surface coal mining permit, coal refuse disposal and reprocessing sites and areas where other beneficial uses incorporated into the reclamation plan are being conducted.

To be placed at active coal mining sites the following additional operational requirements must be met including:

- The volume of the coal ash placed at the site may not exceed the volume of the coal, coal refuse, culm or silt removed, unless approved by the Department. The exception to this is when it is demonstrated that reclamation will be enhanced or water quality improved or certain exceptions for coal refuse reprocessing sites;
- Placement occurs by mixing with spoil or spreading it in horizontal layers no greater than 2 feet thick;
- Spreading and compaction must occur within 24 hours of delivery;
- Requirements of the Modified or Standard Proctor Test must be met when coal ash placement is not accomplished by mixing with spoil;
- Maintenance of the sources and volume of coal ash utilized;
- An approved water quality monitoring plan; and
- Minimization of fugitive dust.

Additional requirements are necessary for sites utilizing coal ash as a soil substitute, soil additive, or utilized at a coal refuse disposal site. Quarterly water monitoring must be collected and submitted to the Department for review, unless less frequent monitoring is approved by the Department. Annual reporting of coal ash placed on a coal mining activity site must be submitted to the Department. Any deviation from the approved physical or chemical standards must be reported to the Department within 72 hours.

290.105. Beneficial use at abandoned mine lands (“AML”).

Coal ash is permitted on AMLs in instances where reclamation is performed pursuant to a contract with the Department contingent upon the following:

- Compliance with all terms of this code and ancillary applicable environmental statutes and regulations;
- Appropriate Certification as detailed in this regulation; and
- An approved contract as detailed herein.

Each aforementioned contract proposal has several components, including a description of the project; proof that the coal ash has been certified for its intended use, including the identity of the generator; a reclamation plan prepared and sealed by a professional engineer; a signed statement of the land owner consenting to the placement of the coal ash which must be recorded, and a detailed water quality monitoring plan. The description of the project shall include a commencement and completion date for the project, the amount of coal ash to be utilized—in cubic yardage—and detail the coal ash placement and storage of the coal ash prior to placement and properly identify the sources of the coal ash. When coal ash is utilized as a soil substitute or an additive, the proposal must also include the justification for coal ash as beneficial use and the application rate. In the event more than 10,000 tons of coal ash per acre or more than 100,000 total tons of coal ash are utilized at one project public notice must be given for a period of three consecutive weeks. Contiguous projects will be considered a single project when determining if the above factors apply. The Department also has discretion to require other coal ash placement projects be advertised. A proof of publication of the notice is required demonstrating the notice contained:



- Name and business address of proposer;
- Description of the location and scope of the use; and
- Location where a copy of the contract proposal is available for public inspection.

Additionally, certain operating requirements for use of coal ash are required:

- Slope cannot exceed 2.5 horizontal to 1.0 vertical, unless approved by the Department after a demonstration of stability;
- Uniformity of spreading is necessary and compacting in layers shall not exceed two feet in thickness unless approved by the Department. Spreading and compacting must occur within 24 hours of delivery unless provisions relative to coal ash storage are invoked;
- Surface runoff must be minimized and storm water managed;
- Surface water shall be diverted;
- Twelve inches of soil must cover the coal ash unless an infiltration buffer is utilized;
- Minimum compaction of 90% or 95% of the maximum dry density must be accomplished in conformity with the Modified Proctor Test or the Standard Proctor Test, respectively. Ash from each source shall be tested individually;
- Fugitive dust must be minimized;
- When used for reclamation the coal ash generally cannot be placed within:
  - 100 feet of an existing intermittent or perennial stream or within 300 feet of an exceptional value or high quality water, unless demonstration is

made to the Department that placement in this zone is necessary to achieve remediation of abandoned mine features located within this zone;

- 100 feet of a sinkhole or a wetland (but not an exceptional value wetland which requires a 300 foot buffer); and
  - A 100-year floodplain of a water of the Commonwealth unless protection of this area is available consistent with the Flood Plain Management Act, the Storm Water Management Act and the Dam Safety Encroachment Act.
- When used as a soil substitute or soil additive, the coal ash shall be applied at a rate per acre that protects public health, public safety and the environment; must be part of the approved reclamation plan to increase productivity or properties of the soil; and may not be used in excess of the maximum cumulative loading rates.

An annual report must be filed with the Department detailing the company contact information, identity of the reclamation contract, including Department-assigned certification identifier, identity of each source of coal ash and the amount of coal ash placed on the site during the previous calendar year.

Should any person utilizing coal ash for beneficial use discover evidence that the coal ash does not meet certification requirements this person must notify the Department within 72 hours.

290.106. Other beneficial uses.

The following do not require a permit as they are deemed beneficial uses. This determination is contingent upon the uses complying with the requirements of this section:

- Coal ash used in the manufacture of concrete or cement as long as it is utilized within 24 hours of delivery or stored in accordance with applicable coal ash storage criteria;
- Extraction or recovery of a component of coal ash as long as it is stored appropriately before and after extraction or recovery and disposal of the unutilized fraction of coal ash is subject to the applicable requirements for residual waste;
- Use of fly ash as a stabilized product. Moreover, when fly ash is altered prior to use or during placement it will be considered a beneficial use if:
  - The person proposing use gives advance written notice;
  - Fly ash is not mixed with solid waste—unless advance, written approval is given by the Department;
  - The use results in a demonstrated reduction of the potential of the material to leach constituents into the environment;
  - If the fly ash is used as structural fill the applicable requirements contained herein are met; and
  - If the fly ash is used as a soil amendment the applicable requirements contained herein are met.

- Use of bottom ash or boiler slag as an antiskid material or road surface preparation material, if consistent with applicable Department of Transportation specifications. Note: the use of fly ash for the same purpose is *not* deemed a beneficial use;
- Use of coal ash as raw material for a commercially valuable product including the use of bottom ash as construction aggregate. Provisions relative to storage prior to processing are applicable;
- Use of coal ash pipe bedding contingent upon advance, written notice to the Department including an evaluation of the pH and chemical analysis of the coal ash;
- Use of coal ash for mine subsidence control, mine fire control and mine sealing, if the following are true:
  - Advance, written notice is given to the Department;
  - Utilization occurs within 24 hours of delivery, unless storage provisions are adhered to;
  - If funded by the Department, all Departmental requirements and contracts must be adhered to; and
  - The coal ash will undergo cementitious reactions.
- Use of coal ash as a fuel. To be considered a “fuel” the minimum heating value of 5,000 btu/lb must be exceeded. Storage of the coal ash prior to use must be consistent with this subchapter.

To fully comply with a designation of beneficial use, any person using coal ash is obligated to notify the Department of any evidence that the material does not meet appropriate chemical or physical property requirements and documentation of chemical and physical analyses of the quantity of coal ash utilized, placement and sources must be maintained for a minimum of three years following the cessation of use of the coal ash.

290.107. Requests for information.

The Department has the right to request information documenting compliance with this subchapter and failure to have documentation of compliance may result in a presumption of that person disposing of residual waste without a permit.

290.201. Coal ash certification.

To obtain coal ash certification, the following must be met:

- Maximum acceptable leachate levels must be met. Specifically, for metals and other cations (other than selenium) the criterion is 25 times the waste classification standard for a contaminant. For selenium and sulfate, 10 times the waste classification standard and for non-metals and anions (other than sulfate and fluoride) the waste classification standard for a contaminant;
- pH must be greater than 7.0;
- When coal ash is utilized as an alkaline additive, the calcium carbonate equivalency must be a minimum of 100 parts per thousand. The Neutralization Potential Test is the standard unless another is approved by the Department; and

- When coal ash is utilized as a low permeability material the hydraulic conductivity must be  $1.0 \times 10^{-6}$  or less. This is evaluated utilizing approved Department standards. The testing must use compaction and other preparation techniques to simulate conditions at the mine site.

To reach the parameters established above, lime or cement may be added to the coal ash contingent upon request to and approval by the Department.

Requests to the Department for certification by a generator must include:

- Name and location of the generator;
- Designation of the beneficial use or uses requested;
- A specific description of the generation process. This should include details on the combustion and pollution control processes, the impact of these processes on the coal ash, fuel sources utilized and the expected percentages of coal ash that will be derived and ultimately delivered to the beneficial use site;
- Description of any material mixed with the coal ash;
- A detailed chemical analysis, from a documented environmental laboratory, on at least four samples, taken throughout a 2 to 6-month sampling period within a year that fully characterizes the composition of the coal ash. This analysis must include:
  - Total concentrations and leachable concentrations of a full complement of heavy metals using methods and pH using soil and waste pH method

found in EPA's Test Methods for Evaluating Solid Waste, Physical/Chemical Methods" (EPA Publication No. SW-846) or comparable methods approved by the Department. Leachate concentrations must be determined using EPA Method 1312, or an approved Department alternative.

- A laboratory analysis for optimum moisture content and dry density;
- Analysis of hydraulic conductivity;
- Determination of neutralization potential;
- A detailed description of the sampling methodology utilized; and
- Other necessary testing if required for a specific beneficial use proposed.

The Department will review requests and notify the generator in writing of the assigned certification identifier or rationale as to why the source was not certified.

If the coal ash is certified, the generator shall submit regular monitoring information demonstrating continued compliance. The monitoring information shall include at least one representative sample, taken quarterly. Further, a representative sample is required whenever there is a change in operation that could result in a chemical or physical component of the coal ash. Annually a report must be produced that includes the weight, in dry tons of coal ash produced for beneficial use in the previous calendar year, an estimate of the volume and the locations of where the coal ash is delivered.

A coal ash generator shall notify the Department of any changes to the information found in the application or evidence that the coal ash is not meeting certification requirements.

290.202 Revocation of certification.

Certification will be revoked if any of the following occur:

- Monitoring requirements are not met;
- Coal ash exceeds certification standards and exceedance certification requirements, as outlined *infra*; or
- Physical or chemical characteristics make the coal ash unsuitable for beneficial use.

Should certification be revoked, the coal ash cannot be used at a coal mining activity site or an AML site in the Commonwealth unless recertification is approved by the Department as outlined *infra*.

Recertification is possible if the generator can demonstrate via a detailed chemical analysis on the three recent monthly representative samples that the coal ash meets the certification requirements, and there are no physical or chemical characteristics that make the coal ash unsuitable for beneficial use.

290.203 Exceedance of certification requirements.

Should sample results exceed any certification standard, the generator must—within 30 days of receiving the results—submit to the Department the following, as applicable:



- In the event of a laboratory error, documentation and an explanation of the error from the laboratory along with a corrected analysis demonstrating the coal ash certification standards are met; and
- Demonstration of an anomaly. This shall be documented by a comparison of the anomalous sample with prior samples; additional samples demonstrating criteria are being met; a plan for temporary increases in monitoring; and an explanation of the cause of the exceedance and how further exceedances will be avoided.

By providing this information, should the generator demonstrate to the Department's satisfaction that the exceedance is an anomaly, use of the coal ash as a beneficial use may resume. Failure to provide this information will result in a revocation of beneficial use certification for the source.

#### 290.301. Water quality monitoring.

Prior to placement or storage of coal ash, a water quality monitoring plan shall be submitted to the Department. At a minimum the plan must include:

- The location and design of down gradient and up-gradient monitoring points;
- A minimum of 12 background samples from each monitoring point taken at monthly intervals prior to placement of coal ash; and
- Samples are to be taken quarterly after approval.

The person taking the samples and the laboratory performing the analysis shall employ the quality assurance/quality control procedures outlined in the EPA's Handbook for

Analytical Quality Control in Water and Wastewater Laboratories or Test Methods for Evaluating Solid Waste. The analytical methodologies used to meet the requirements of this section must follow established EPA protocol. The laboratory performing water quality analysis must be in conformity with Department mandated environmental laboratory accreditation.

Samples are to be analyzed for pH, temperature, specific conductance, alkalinity, acidity, sulfate, chloride, fluoride, nitrate, ammonia, and total suspended solids without filtration.

Samples shall be analyzed for a host of heavy metal, total and dissolved concentrations. Also, static water elevation for monitoring wells and for springs, seeps and mine discharges must be measured. Additional parameters may be required at the Department's discretion.

Quarterly water quality monitoring will continue and be submitted to the Department for a minimum of five years after final placement or storage of coal ash and annually thereafter from the end of year five through 10 years after final placement or storage, unless a longer period is required by the Department.

A demonstration of attainment of applicable groundwater or surface water remediation standards must be made and must be in conformity with this subchapter relative to assessment and abatement.

290.302. Number, location and depth of monitoring points.

The water quality monitoring system shall accurately characterize groundwater and surface water flow and chemistry and flow systems on the site and adjacent areas. To achieve this, the following must be met:

- At least one point that is up-gradient of the coal ash placement in order to provide representative data of groundwater not affected by the coal ash placement. The exception to this is in the event the placement is the up-gradient point; in such instances down gradient monitoring points will be utilized;
- At least three groundwater monitoring points down gradient of the coal ash placement, unless two are approved by the Department. Furthermore, at the Department's discretion, springs, seeps and mine discharges may serve as substitutes if they are down gradient and will be as effective in monitoring the coal ash placement. Down gradient wells must be hydrologically connected to the area of coal placement and constructed in a manner to detect chemical influence of the coal ash placement area throughout the longevity of the placement of coal ash. These points must be developed and protected as approved by the Department; and

- Surface water monitoring points are necessary where such monitoring may indicate any chemical influence on the hydrologic regime from coal ash placement.

Up-gradient and down gradient points should be sufficient in number, location, and depth to be representative of water quality. These points shall not interfere with routine operations at the site and in most cases should be within 200 feet of the coal ash placement area.

Up-gradient points shall be located so as not to be affected by effects on groundwater or surface water from the coal ash placement area. Down gradient monitoring points shall be placed to provide early detection.

All wells drilled must be in compliance with the Water Well Drillers License Act and all well materials shall be decontaminated prior to installation.

#### 290.303 Standards for wells and casing of wells.

Monitoring wells must be cased to maintain the integrity of the borehole and be constructed of material that will not reach groundwater that is being monitored. The minimum casing diameter must be four inches. The well must be constructed with a screen that is factory-made, will not react with the groundwater and the screen must maximize open area to minimize entrance velocities and allow rapid sample recovery.

The well must be filter-packed with chemically inert clean quartz sand, silica or glass bead. The material chosen must be well-rounded and dimensionally stable.

The casing must extend at least one foot above ground, unless the Department allows for flush mount wells.

The annular space above the sampling depth must be sealed to prevent contamination and the casing must be designed and constructed to prevent cross contamination. The Department has discretion to approve alternative casing designs for wells in stable formations.

The protective monitoring well casings must be enclosed in a protective casing that protects the well from damage, be installed for at least 10 feet above the well cap and must stick up at least three feet, and be grouted and placed with a concrete collar at least three feet deep. The casing must be numbered, protrude above the monitoring well casing, have a locked cap and must be made of steel or other material of equivalent strength.

#### 290.304. Assessment plan.

An assessment plan must be prepared within 60 days should any of the following occur:

- Degradation is indicated from water monitoring. Federal ground water sampling and analysis requirements will be utilized to assess the data; or

- Laboratory analysis of public or private water supplies indicate contamination of ground or surface water that could reasonably be attributable to coal ash placement.

Assessment must consist of chemical data and a supporting narrative should one of the following apply:

- Ten working days following receipt of the degraded sample and the re-sampling indicates degradation has not occurred. Determination that degradation is not present must be approved by the Department; or
- Twenty working days following receipt of the degraded sample, demonstration is made that the degradation is caused by seasonal variations or activities unrelated to coal ash placement.

The assessment plan must specifically address the existence of, quality, quantity, area, extent and depth of degradation and the rate and direction of migration of contaminants. It must be prepared and sealed by a professional geologist.

For assessment plans involving wells, lysimeters, borings, pits, piezometers, springs, seeps, mine discharges and other assessment structures or devices, the number, location, size, casing type and depth must be included. If the assessment points are wells they shall be constructed in accordance with this subchapter.

All assessment plans must include:

- Sampling and analytical methods for parameters to be evaluated;

- Evaluation procedures, including the previously gathered groundwater or surface water quality and quantity information is to be included to determine the concentration, rate and extent of groundwater or surface water degradation from the facility;
- A biological assessment of surface water;
- An implementation schedule; and
- Identification of the abatement standard that will be met.

The assessment plan shall be implemented upon approval by the Department within a reasonable time not to exceed six months.

Should the Department determine the proposed plan is inadequate; it may modify the plan and approve it as modified.

If the groundwater or surface water assessment indicates that contamination is leaving the coal ash placement site, the person shall notify, in writing each water supply owner within one-half mile down gradient of the coal ash placement area that an assessment has been initiated.

Within 45 days after the completion of the assessment plan, the person shall submit a report containing the new data collected, analysis of the data, and recommendations on the necessity for abatement.

If the Department determines after review of the assessment report that implementation of an abatement plan is not required—pursuant to this subchapter—a revised water quality monitoring plan must be submitted for approval to the Department. This revised water quality plan must outline any necessary changes and include an application for permit modification if applicable. The modifications to the plan shall be implemented within 30 days of approval.

Nothing in this section prevents prior or concurrent abatement or water supply replacement.

290.305. Abatement plan.

An abatement plan must be submitted to the Department when any of the following occur:

- The aforementioned assessment plan demonstrates the presence of groundwater or surface water degradation and analysis indicates an abatement standard will not be met at the compliance points;
- Departmental monitoring indicates the exceedance of an abatement standard even in a situation where an assessment plan has not been completed. The following are exceptions to this standard and an abatement plan will not be required to be implemented:



- Within ten days after receipt of the results re-sampling of the affected monitoring points indicates exceedance of an abatement standard has not occurred and the Department concurs.
- After a biological assessment of surface water indicates a detrimental effect to biota.

Abatement plans must be prepared and sealed by a professional geologist licensed to practice in this Commonwealth. The plan must include specific abatement of groundwater or surface water degradation, techniques to prevent further degradation and a schedule for implementation.

Abatement procedures must demonstrate compliance with at least one of the following standards at the identified compliance points:

- Situations where Statewide health standards are applicable, compliance with the Statewide health standard for that constituent at and beyond 500 feet of the perimeter of or the property boundary, whichever is closer;
- The background standard for constituents at and beyond 500 feet of the perimeter of the coal ash placement area or at and beyond the property boundary, whichever is closer. Load-based standards at groundwater discharge points are acceptable under certain circumstances where approval was otherwise granted by the Department;

- Constituents for which no primary maximum contaminant levels exist the risk-based standard (addressed *supra*) at and beyond 500 feet of the perimeter of the placement area or the property boundary, whichever is closer is applied if the following conditions are met:
  - The risk assessment used to establish the standard assumes human receptors are present at the boundary;
  - The level is derived in a manner consistent with generally accepted and applicable health risk assessments; and
  - The level is based on scientifically valid studies conducted in accordance with good laboratory practice standards or other scientifically valid studies approved by the Department and
  - If the constituent is a carcinogen, the level represents a concentration associated with an excess lifetime cancer risk level of  $1 \times 10^{-6}$  to the negative fifth power at the property boundary.

When measuring compliance with secondary contaminants with statewide health standards or those with no primary maximum contaminant level, the Department may approve a compliance point beyond 500 feet on land owned by the owner of the coal ash placement area.

The abatement plan shall be completed and submitted to the Department for approval within 90 days, unless modified in writing.

In the event the plan is deemed inadequate it may be modified and approved or the submission of a sufficient modification may be required by the Department.

The abatement plan shall be implemented within 60 days of approval.

Should the Department determine that the plan is incapable of achieving the groundwater or surface water protection contemplated in the approval the Department may issue an order outlining one or more of the following: requiring a proposed modification to the abatement plan; requiring implementation of an abatement plan modified by the Department or another order the Department deems effective for enforcement.

290.306. Recordkeeping.

Records, analyses, and evaluations of monitoring data and groundwater elevations must be maintained for a minimum of three years after water quality monitoring ceases. This documentation must be made available to the Department upon request.

290.307. Interim water quality monitoring requirements.

This section is applicable to sites where coal ash has been stored or placed for beneficial use prior to December 11, 2010, and will continue after that date.

Sites not previously subject to water quality monitoring requirements must submit a water quality monitoring plan whereby the location and design of down gradient and up-

gradient monitoring points is identified and samples are taken quarterly. This plan shall be implemented within one year of the Department's approval of the plan.

Sites previously subject to water quality monitoring must ensure new monitoring points and replacement wells constructed after December 11, 2011, comply with the provisions of this subchapter including number, location and depth of monitoring wells and ensure the wells are properly cased as set forth in this subchapter.

All water quality monitoring after March 11, 2011, must include analysis of pH, temperature, specific conductance, alkalinity, acidity, sulfates, chlorides, fluoride, nitrate, nitrite, ammonia and total suspended solids as well as analysis of a variety of heavy metals and static water elevation for monitoring wells and the flow of springs, seeps and mine discharges must be measured.

#### *Summary of Proposed Amendment Submitted by Pennsylvania*

The key provisions of the rule address the operating requirements for beneficial use of coal ash upon active and abandoned mine land sites. The proposed amendment addition has the following components:

- Chemical and physical certification standards for coal ash to ensure compliance with beneficial use requirements;
- Coal ash monitoring to ensure coal ash meets qualification criteria;

- Water quality monitoring to create a robust dataset to facilitate the evaluation and documentation of water quality at sites where coal ash is beneficially used;
- A minimum number of monitoring points to characterize the groundwater;
- Recording of the landowner consent for placement of coal ash for beneficial use;
- Reporting of volumes and locations where coal ash is beneficially used;
- Operational and monitoring standards for all types of beneficial use;
- A centralized process to qualify coal ash for beneficial use at mine sites;
- An annual fee payable to the Department to offset some of its costs for coal ash and water quality sampling and testing at mine sites where coal ash is beneficially used; and
- Abatement plan requirements in the event that site assessments indicate groundwater or surface water degradation.

### **III. Public Comment Procedures**

Under the provisions of 30 CFR § 732.17(h), we are seeking your comments on whether Pennsylvania's proposed amendment satisfies the applicable program approval criteria of 30 CFR § 732.15. If we approve the amendment, it will become part of Pennsylvania's State Program.

#### Electronic or Written Comments

If you submit written comments, they should be specific, confined to issues pertinent to the proposed regulations, and explain the reason for any recommended change(s). We appreciate any and all comments, but those most useful and likely to influence decisions on the final regulations will be those that either involve personal experience or include citations to and analyses of SMCRA, its legislative history, its implementing regulations, case law, other pertinent State or Federal laws or regulations, technical literature, or other relevant publications.

We cannot ensure that comments received after the close of the comment period (see DATES) or sent to an address other than those listed (see ADDRESSES) will be included in the docket for this rulemaking and considered.

#### Public Availability of Comments

Before including your address, phone number, e-mail address, or other personal identifying information in your comment, you should be aware that your entire comment including your personal identifying information may be made publicly available at any time. While you can ask us in your comment to withhold your personal identifying information from public review, we cannot guarantee that we will be able to do so.

#### Public Hearing

If you wish to speak at the public hearing, contact the person listed under FOR FURTHER INFORMATION CONTACT by 4:00 p.m., EST, on [Insert date 15 days

after date of publication in the FEDERAL REGISTER]. If you are disabled and need reasonable accommodations to attend a public hearing, contact the person listed under FOR FURTHER INFORMATION CONTACT. We will arrange the location and time of the hearing with those persons requesting the hearing. If no one requests an opportunity to speak, we will not hold a hearing.

To assist the transcriber and ensure an accurate record, we request, if possible, that each person who speaks at the public hearing provide us with a written copy of his or her comments. The public hearing will continue on the specified date until everyone scheduled to speak has been given an opportunity to be heard. If you are in the audience and have not been scheduled to speak and wish to do so, you will be allowed to speak after those who have been scheduled. We will end the hearing after everyone scheduled to speak and others present in the audience who wish to speak, have been heard.

#### Public Meeting

If only one person requests an opportunity to speak, we may hold a public meeting rather than a public hearing. If you wish to meet with us to discuss the amendment, please request a meeting by contacting the person listed under FOR FURTHER INFORMATION CONTACT. All such meetings are open to the public; if possible, we will post notices of meetings at the locations listed under ADDRESSES. We will make a written summary of each meeting a part of the administrative record.

#### **IV. Procedural Determinations**

##### Executive Order 12866 - Regulatory Planning and Review

This rule is exempted from review by the Office of Management and Budget (OMB) under Executive Order 12866.

##### Other Laws and Executive Orders Affecting Rulemaking

When a State submits a program amendment to OSM for review, our regulations at 30 CFR 732.17(h) require us to publish a notice in the *Federal Register* indicating receipt of the proposed amendment, its text or a summary of its terms, and an opportunity for public comment. We conclude our review of the proposed amendment after the close of the public comment period and determine whether the amendment should be approved, approved in part, or not approved. At that time, we will also make the determinations



and certifications required by the various laws and executive orders governing the rulemaking process and include them in the final rule.

List of Subjects in 30 CFR Part 938

Intergovernmental relations, Surface mining, Underground mining.

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Michael K. Robinson  
Acting Regional Director, Appalachian Region

\_\_\_\_ May 18, 2012 \_\_\_\_  
Date

[FR Doc. 2012-16945 Filed 07/10/2012 at 8:45 am; Publication Date: 07/11/2012]